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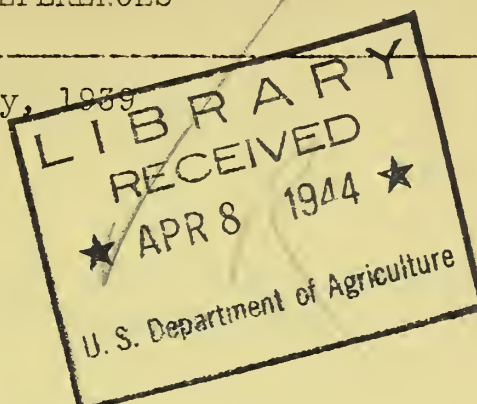
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S O I L C O N S E R V A T I O N L I T E R A T U R E
S E L E C T E D C U R R E N T R E F E R E N C E S

V.3

January/February, 1939

No.1



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"It may be thought that the value of literature is so well established that further comment on the subject is hardly justified. Yet we frequently see evidences of incomplete searches and occasionally find those who feel that they have neither interest nor responsibility in maintaining the highest possible standard of scientific publication...

"Alone and unaided it would be impossible for one man to gain sufficient first-hand experience to cope with modern competition. To his own knowledge he must add from that of others, if he is to grow throughout his professional career. This he can do by personal contact and by studying the printed works of both ancestors and contemporaries in science. It is in the technical literature that he finds the richest source of this experience by proxy."

Industrial & Engineering Chemistry
June 1938, p.602

Compiled By The Library Staff Of The Soil Conservation Service
From Publications Received In The
United States Department of Agriculture Library, Washington, D.C.

The publications listed herein may in most cases be borrowed from the Library of the Soil Conservation Service by members of the Washington and field staffs. For convenience, Library call numbers are given after each book and pamphlet entry. These should be included when requesting loans.

Waldred L. Linton
Librarian

PERIODICAL ARTICLESAgroecology

Bensin, B.M. Agroecology as a basic science of soil conservation.
Soil Conserv. 4(6):132-141, 152, illus. December 1938.

American Society of Agronomy

[American society of agronomy] Minutes of the thirty-first annual meeting.
Jour. Amer. Soc. Agron. 30(12):1049-1072. December 1938.

Partial contents: Committee reports. Bibliography of field experiments.
Additions to bibliography on standardization of field experiments, pp.
1054-1056; Ways and means of increasing the use of limestone in the soil
conservation program (abstract of recommendations of a special committee
of extension agronomists) pp. 1064-1066.

Asphalt

Asphalt used to protect revetments in experiment to control bank erosion.
West. Construct. News 12(2):52-53, illus. February 1937.

New development in river control engineering consists of placing penetration type asphaltic paving to prevent raveling of protective gravel-fill banks on Willamette river - U.S. engineers lay test sections as experiment in channel stabilization.

Buchanan, J.E. Practice and experiments utilizing asphalt in water control and erosion prevention. Asphalt Inst. Construction Ser. 43. 14-23, illus. Aug. 1, 1938.

"References," p. 23.

Paper presented before eleventh National Asphalt Conference, Memphis, Tennessee, December 7 and 9, 1937. It is a summary of existing construction and experimental projects in the West in which asphalt has been used in water control and erosion prevention works. The review covers reservoir linings, protection of earth dams and spillways, canal and ditch linings, bank protection and wind erosion prevention.

Christison, W.E. Asphaltic paving used on flood control revetments.
West. Construct. News 12(6):224-225, illus. June 1937.

Experimental work in Los Angeles county undertaken to develop surfacing with characteristics of low first cost, flexibility, long life and small maintenance - preliminary conclusions are favorable.

Tompkins, W.F. The use of asphalt in river and harbor construction.
Asphalt Inst. Construction Ser. 43. 3-13, illus. Aug. 1, 1938.

Paper presented before eleventh National Asphalt Conference, Memphis, Tennessee, December 7 and 9, 1937.

Development of the asphalt mattress for bank protection and river erosion control is discussed on pp. 5-12.

Tuthill, L.H. Asphaltic oil used on canal banks to prevent movement of dune sand. West.Construct.News 12(9):332-333, illus. September 1937.

A review of the experimental work and methods developed to treat the light blow sand along a 4.34 mi. section of the Colorado river aqueduct.

Beavers

Ruedemann, Rudolf and Schoonmaker, W.J. Beaver-dams as geologic agents. Science 89(2292):523-525. Dec. 2, 1938.

"The authors, from the data presented here, conclude that beavers are able to aggrade all smaller valleys below the size of navigable rivers and having been active for many thousands of years have accomplished an enormous amount of aggrading work and are important physiographic agents. Their work is characterized by complete aggrading of valley floors, originally in small descending steps, which disappear in time and leave a gently graded, even valley plain horizontal from bank to bank. The fine silt gathered in the beaver pools has produced the rich farm land in the valleys of the wooded areas of the northern half of North America."

Civilian Conservation Corps

Fechner, Robert. My hopes for the CCC. Amer. Forests 45(1):10-12, 30. January 1939.

Tells of the various conservation projects undertaken by the CCC.

Contour vs. Straight Farming

Zunkel, K.P. A time study of contouring and straight farming. Soil Conserv. 4(6):129-131. December 1938.

Statistical data obtained as a result of a time survey made in 1935-37 at Bethany, Mo. to measure the amount of time required to perform identical operations on contoured, contour-terraced, and straight-farmed fields, using implements of uniform size in all cases.

Dams

Bids called - Prado dam to involve 3,130,000 cu. yds. of rolled earthfill. Orange county (California) flood control program will be started with structure to control Santa Ana river - U.S. Engineers to direct work. West.Construct.News 13(9):326-327, illus. September 1938.

Blanke, J.H.D. Imperial dam diverts to 72 clarifiers. Bureau of Reclamation engineers have built at Imperial dam on the Colorado river near Yuma, Ariz., the world's largest clarifier installation capable of desilting 12,000 second-foot water for diversion to the all-American canal. Internatl. Engin. 74(1):3-8, illus. July 1938.

Contractor rushes fill operations to complete Boca dam this season.

Structure will solve complex interstate water use problem - storage on Little Truckee river for irrigation in Nevada to stabilize levels of Lake Tahoe - extensive equipment fleet in use. West.Construct. News 13(9):335-338,illus. September 1938.

Includes general information as to dam,river,outlet and spillway.

[Dohse,C.H.] Slopes of earthen dams. Farming So.Africa 13(150):355. September 1938.

Offers an explanation as to why the Soil-Erosion Section,Department of Agriculture and Forestry,Union of South Africa in specifications for earthen dams states that the upstream slope must be 2:1 and the downstream slope 1 3/4:1.

Hatch,H.H. Economic design of hydraulic-fill dam sections. Jour.New England Waterworks Assoc.52(3):364-377,illus. September 1938.

Keutner,C. Regelung kleinerer wasserlaeufe. Bauingenieur 19(11/12) 168-182. Mar.18,1938.

Regulation of small streams by construction of check dams and similar structures;review of German practice.

Densimeters

Culley,Matt. Densimeter,an instrument for measuring the density of ground cover. Ecology 19(4):588-590,illus. October 1938.

Describes "a simple device" used at the Santa Rita experiment range branch of the Southwestern Forest and Range Experiment Station,Tucson, Arizona.

Farm Woodlots

Curtis,J.D. Profits from sound woodlot practices. Rural New Yorker 97(5439)674,illus. Dec.3,1938.

Fencing

Pastures. Clemson Agr.Col.Dept.Agr.Educ.School of Voc.Educ. Agr. Educ.Bull 15(1-2):3-31,illus. Sept/Oct.1938.

"In Agricultural Education,v.9,no.6 and v.9,no.11 various phases of pasture management were summarized.In this bulletin an attempt is made to outline the problems relating to the establishment and maintenance of improved pastures,to list references,and to summarize data on fencing and weed control.Since the electric fence is rapidly gaining in use and appears to be an economical fence,these issues deal largely with the installation and use of this type of fencing material." --Editors' note.

Preston,J.F. A fence around the farm woodland. Soil Conserv.4(6): 133-135,illus. December 1938.

"A fence around the farm woodland is not a guarantee of permanent land use.Fire,grazing,and neglect can be overcome only by manipulation of the three factors - soil,growing stock,management.The ground line philosophy must give way to 'woods appreciation.'"

Floods and Flood Control

Reviewing the official report on the record Los Angeles flood of March 2. West.Construct.News 13(9):328-330,illus. September 1938.

Abstract of the report which covers the elements of (1)rainfall, (2)runoff,and(3)debris movement.

Flow of Waters

Green,A.E. The mean value of the fluctuations in pressure and pressure gradient in a turbulent fluid. Cambridge Phil.Soc.Proc.34(4): 534-539. October 1938.

"References,"p.539.

Scobey,F.C. Problems of flow of water of special concern to agricultural engineers. Agr.Engin.19(12):527-530. December 1938.

Presented before the Soil and Water Conservation Division at the annual meeting of the American Society of Agricultural Engineers, Asilomar,Pacific Grove,Calif.,June 28,1938.

Thomas,A.R. The flow and resistance to flow of water. Indian Engin. 104(4):124-127,illus. October 1938.

Discusses potential and turbulent flow,viscous flow between boundaries,laminar layers,eddy motion,boundary layers,energy aspect,separation of boundary layers and suspended particles.

Forest Influences

Meagher,G.S. Forest cover retards snow melting. Jour.Forestry 36(12):1209-1210. December 1938.

Experiments at the Wind River Experimental Forest,in southern Washington,show that a forest cover will delay the melting of snow for a period of two weeks in the spring and that this delay greatly reduces the danger of spring freshets.

Grasses

Calder,G.G. Regrassing depleted tussock country.Experiments to produce regeneration. New Zeal.Jour.Agr.57(5):399-400,illus. Nov.21,1938.

In New Zealand it is considered that the regeneration of the denuded and semi-denuded country can be brought about by (1)completely closing up the country from the grazing animal for,say,two or three years; (2)the surface-sowing of suitable pasture species which will stand up to the conditions.

"The possibility of tall cat-grass being used to form the basis of a seed mixture for the regressing of tussock country is being tested. It is hoped that a species of this grass will prove a more valuable aid to regressing than the silver tussock,which is difficult to re-introduce."

Crafts,E.C. Height-volume distribution in range grasses. Jour. Forestry 36(12):1182-1185. December 1938.

"There are 137 million acres of usable range in Arizona and New Mexico,and livestock production is an outstanding industry in the

Southwest. Basic resources of this industry are the soils and the vegetation they support. Continued production of range grasses is, in a large measure, dependent on forage utilization. The importance of knowing what constitutes proper use of a given kind of grass and having an accurate method of measuring its utilization becomes evident when one realizes that a 10-per cent variation in the use of the herbage volume may result in continued productivity or gradual death of the plant."

Dittmer, H.J. A comparative study of the subterranean members of three field grasses. Science 88(2290):482. Nov. 18, 1938.

A study of the roots and root hairs in upper soil levels for oats, winter-rye and Kentucky bluegrass indicate that these grasses have from 150,000 to 1,000,000 root hairs per cubic inch of soil.

"From the standpoint of their usefulness as soil binders oats would be least efficient, rye intermediate and bluegrass far superior to either of the others in retarding erosion."

Gardner, D.J. Success of Rhodes grass in co-operative demonstration plots in east Griqualand. Farming So. Africa 13(150):363-364, illus. September 1938.

Growing grass for the seed -- a new venture. Kans. Farmer 75(26):1-2, illus. Dec. 17, 1938.

Describes SCS Kansas nursery practices in connection with seedings of Big and Little Bluestem, Switch and Indian grass.

Thirty most valuable range grasses for Arizona. Ranger 4(11):1. Nov. 20, 1938.

Prepared by the botanist of the Arizona agricultural experiment station, the list is based on the following characteristics; (1) heavy seed protection; (2) good hay production; (3) nutritious forage for winter pasture; (4) nutritious and palatable forage; (5) tolerance to close grazing and trampling; (6) occurrence in abundance over large areas; (7) long seasonal growth; (8) dense growth of basal leaves; (9) pronounced drought-resistant qualities; (10) valuable as a soil conservation plant.

Highway Erosion Control

Andersson, K.S. Easy roadside planting. Engin. News-Rec. 122(1):43, illus. Jan. 5, 1939.

"In road maintenance in the Philippine Islands tropical rains present a problem in erosion. Landslides are frequent and severe. Fortunately, these same tropical rains also furnish the solution to the erosion problem. Sticks of any fast-growing plant are simply cut off and thrust into the ground. In a week or two, they will have rooted and put forth leaves. In only a month or two, the fierce fight for life ever taking place in the tropics will have transformed the bank into a dense, choked mass of small trees - a jungle.

"Softwoods, such as Ipil-ipil or cacawate, are the favorites, as these grow rapidly and have roots below the ground about as deep as the height of the tree above the ground."

Entire item quoted.

Corum, W.T. Highway fill-slope fixation methods developed by U.S. Forest Service. Advance in highway construction practice has disregarded adequate protection for fill slopes against erosion - care in alignment, modified construction methods, proper drainage and slope treatment deserve consideration. West. Construct. News 13(8):287-291, illus. August 1938.

Stacey, W.A. Highway ditch checks should be installed when road is built. Pub. Works 69(9):22, illus. September 1938.

The author is of the opinion that early installation of ditch checks not only prevents erosion, but also alleviates haphazard construction methods and high maintenance costs at a later date.

Also in Wood Preserving News 16(8):97-99, illus. August 1938.

Van London, W.J. Conservation along the highway. Texas roadbuilders are among leaders in erosion prevention. Texas Parade 3(6):6-7, 25-27, illus. November 1938.

Quotes from report of J.E. Gaston of the Texas State Highway Department in which he explains why a highway department interests itself in soil erosion and water conservation.

Hydraulics and Hydrology

Hayami, Shoiti. Hydrological studies on the Yangtze river, China. Jour. Shanghai Sci. Inst. Section 1.1:97-162, 175-198. March, July 1938.

Part I. Variations in stage of the Yangtze river at Hankow and some climatic changes in central China inferred from them. (Separate print no. 7)

Part II. A theory of silt transportation by running water. (Separate print no. 9)

Lane, E.W. and Kindsvater, C.E. Hydraulic jump in enclosed conduits. Engin. News-Rec. 121(26):815-817, illus. Dec. 29, 1938.

"Laboratory tests show that the momentum theory of jump applies to irregular and enclosed conduits."

Lefrance, Edouard. Hydraulique. Formules relatives a l'hydraulique souterraine (Flow of underground water) Génie Civil 113(8):162-166, illus. Aug. 20, 1938.

Theoretical mathematical discussion of laws of flow of water through underground formation, including cases of vertical and radial percolation through artesian strata.

New hydraulic laboratory at St. Anthony Falls. University of Minnesota uses abandoned power site for an unusual laboratory for hydraulic research and testing of hydraulic equipment. Engin. News-Rec. 121(22):725-726, illus. Dec. 8, 1938.

One of the projects under way is a study sponsored by the American Society of Civil Engineers concerning sedimentation at the confluence of river channels.

Phillips, E.A.W. The conic determination of hydraulic flow. Indian Engin. 104(3):101-107, illus. September 1938.

Posey, C.J. and Hsing, P.S. Hydraulic jump in trapezoidal channels. Engin. News-Rec. 121(25):797-798, illus. Dec. 22, 1938.

This article is in part a condensation of a thesis submitted by the junior author to the State University of Iowa.

Formulas developed provide information useful in preliminary design and selection of economic side slope.

Irrigation

Veihmeyer, F.J. and Hendrickson, A.H. Water-holding capacity of soils and its effect on irrigation practices. Agr. Engin. 19(11):487-490, illus. November 1938.

"References," p. 490.

Presented before the Soil and Water Conservation Division at the annual meeting, American Society of Agricultural Engineers, Pacific Grove, Calif., June 28, 1938.

Land Utilization and Policy

Johnson, S.E. Farm management aspects of land planning. U.S. Bur. Agr. Econ. Land Policy Rev. 1(4):6-8. Nov/Dec. 1938.

Outlines the type of approach to the study of land problems in Montana. It is indicated that similar studies are being pursued in South Dakota, Nevada and Texas.

McCrory, S.H. Water and the land. Agr. Engin. 19(12):519-522, illus. December 1938.

Address delivered before annual meeting, American Society of Agricultural Engineers, Asilomar, Pacific Grove, Calif., June 28, 1938.

Saunderson, M.H. Economic relationships of public lands and privately owned grazing lands in the western states. Jour. Farm Econ. 20(4):841-853. November 1938.

The following points are discussed: The public grazing land resource; organization for management; relation of privately owned lands to public lands; should the public lands be used at all for the production of livestock; what will be the level of use and the conservation practices applied to the public lands if they are to continue to support livestock for an indefinite time in the future? how should grazing on public lands be integrated with the use of the privately owned lands? how much permanency should be recognized in the preferences for grazing on public lands? should competitive prices be charged for the use of grazing lands in public ownership?

Taylor, W.P. Value of wildlife research for proper land-use management. Amer. Wildlife 27(4):72-73, 77, illus. Jly/Aug. 1938.

Lysimeters

Demolon, A. and Bastissè, É. Lysimeter experiments. Recherches Fertilisation Sta. Agron. Ministère Agr. (France) 11, 14-20. 1938.

"The losses of P_2O_5 and K_2O are greater from the lysimeters contg. cultivated (alfalfa) soil than from those contg. bare soil. The opposite is true for CaO because of the reduced vol. of drainage water. The

results for S, N and MgO are variable. There is more loss of org. matter in the bare soil than in the cultivated soil. The addn. of org. matter increases the yields on the cultivated soils, slightly lessens drainage and increases evapn. on both soils and increases the losses of all nutrients from the bare soil. In the cultivated soils straw decreases the loss of C_2O , while manure slightly lessens the losses of K_2O and increases those of the other elements. Internal irrigation of the lysimeters tends to lessen the removal of any of the nutrients. Covering a lysimeter with paper increases the yield by approx. 47 o/o, cuts down desiccation of the soil and evapn., increases the loss of C_2O and diminishes losses of other elements." --J.R. Adams, Chem. Abs. 32(21):8656. Nov. 10, 1938.

Maps and Mapping

Land-use maps have public and business values. Amer. City 53(12): 62-63, illus. December 1938.

"When detailed land-resources maps of approximately 300 Massachusetts towns are completed (by WPA) any citizen will be able to purchase for a negligible sum a complete set of five large-scale maps showing intimate, detailed and hitherto unavailable data concerning land use, land quality, land resources, land contours, roads, waterways, and the nature of man-made structures and engineering works in all the rural areas in Massachusetts.

Markey, Morris. United States gets its picture taken. Current Hist. 49(4):37-39, illus. December 1938.

Aerial photography, its application and possible uses. Reference is made to this type of work in the Soil Conservation Service.

Matheson, J.L. An aerial survey of the estuary of the river Dee, employing a simple method of rectifying oblique photographs. Inst. Civ. Eng. Jour. 10(1):47-54, illus. November 1938.

Wilson, R.E. Buffed celluloid broadens use of aerial photos. Jour. Forestry 36(12):1245-1246. December 1938.

Explanation of the use of buffed celluloid, devised in New Mexico by the Soil Conservation Service.

Microfilms

Dice, L.R. A simple method for filing miniature negatives and microfilm records in strips. Science 80(2298):39-40. Jan. 13, 1939.

Seidell, Atherton. The utilization of microfilms in scientific research. Science 80(2298):32-34. Jan. 13, 1939.

Explanation of the Bibliofilm Service conducted by cooperative agreement in the libraries of the U.S. Department of Agriculture, Army Medical, Geological Survey and Bureau of Standards which makes it possible for anyone to obtain copies of articles and publications at a cost of 1 cent per page plus 20 cents service charge.

Necessary equipment for the reading of microfilms is a small hand magnifier available at a cost of \$1.50 or "a highly perfected desk projector" available at about the price of a typewriter.

Run-off

Meyer, O.H. Analysis of run-off characteristics. Amer. Soc. Civ. Engin. Proc. 64(9):1769-1786, illus. November 1938.

"Synopsis: "An analysis of the characteristics of run-off hydrographs is outlined in this paper, which proposes a revision of current methods for the determination of stream flow from rainfall. It is shown that a continuous rain of constant intensity produces a hydrograph of characteristic shape for any drainage area, and that this shape and the length of time until the run-off becomes constant (time of concentration) are functions of the shape and size of the drainage area. A method of constructing a hydrograph resulting from rain of duration less than the time of concentration is proposed. Based on this analysis, methods have been devised for determining hydrographs for areas lacking in run-off records, from the records of other areas similar in characteristics but different in size, and for the construction from rainfall data of hydrographs for storms or series of storms of varying intensity."

Sedimentation and Silt

Faris, O.A., Christiansen, J.E., Shulits, Samuel and Lacey, Gerald. A theory of silt transportation. Amer. Soc. Civ. Engin. Proc. 64(10): 2061-2069. December 1938.

Discussion of paper of same title by W.M. Griffith.

Imperial dam and desilting works. Dedication marks completion of unique irrigation structure on Colorado river now ready to serve All-American and Gila canals. Engin. News-Rec. 121(22):736-737, illus. Dec. 8, 1938.

Jorissen, André. Etude expérimentale du transport solide des cours d'eau. Rev. Universelle des Mines 14(3):269-282. March 1938.
Bibliography, p. 282.

Article in French.

Results of theoretical and experimental studies of transportation of silt and other river-bed materials, with special reference to work recently done in United States.

Rates of debris collection by check and storage dams. Engin. News-Rec. 122(1):16. Jan. 5, 1939.

Table gives figures on siltation of Los Angeles county reservoirs after floods of March 2, 1938.

Silt-eliminating flume for high silt content water. Pub. Works 69(6): 15-16. June 1938

The principal features are described of the installation recently made near Columbus, Ohio, the Loup River Public Power District.

Wilson, A.N. The stability of earthen channels. V. Practical application of silt effects. Indian Engin. 104(3):93, 88. September 1938.

Soil Conservation. Study and Teaching.

Carter, Harriet. Saving our soils. A unit of study for junior and senior high schools. Jour. Geogr. 37(8):308-318. November 1938.

Quimby, W.G. How shall we teach conservation? Conserv. 4(6):21-22.
Nov/Dec. 1938.

Soil Conservation Districts Law

Ellis, L.S. The soil conservation districts law of Oklahoma. South-west. Soc. Sci. Quart. 19(2):183-188. September 1938.
A discussion.

Lepawsky, Albert. The farmer practices public administration.
Nat'l. Munic. Rev. 27(10):485-489. October 1938.

"Establishment of [soil] conservation districts should bring results of far-reaching importance. Such districts not only seek to conserve the nation's resources but demonstrate the practicability of crossing local government barriers in order to perform essential services."

Soil Erosion and Control. Foreign Countries.

Clayton, E.S. Soil erosion by wind and water. Shire and Munic. Rec. 31(6):217-220, illus. Sept. 28, 1938.

Address delivered before the Town and Country Planning Institute of New South Wales, Aug. 19, 1938.

Refers to conditions in Australia.

Du Toit, A.G.S. Co-operative demonstrations. Farming So. Africa 13(150): 335-336, illus. September 1938.

In South Africa it is realized that "ocular demonstration" offers the most satisfactory method for instructing the adult population in regard to scientific farming principles. In 1929 there were 115 co-operative demonstrations and in 1937 there were 830.

"Great stress is being laid on the fact that any profitable and permanent agricultural practice must be based upon good soil management, the production of reserve feed, and the proper care and management of stock. In some districts strip farming is becoming popular. Where this type of farming is practised, different crops are usually sown in the same field; each crop is sown on the contour, and is divided from the others by contour banks."

Flemmich, C.O. River bank erosion in Brunei. Malayan Forester 7(4): 188-189. October 1938.

Cites examples of erosion along the Belait, Tutong and Temburong rivers in Brunei, Asia.

The first Land Code introduced in Brunei in 1909 provided for natural river-bank protection but the law has never been enforced.

Gardner, D.J. Contour farming in east Griqualand. Farming So. Africa 13(149):293-295, illus. August 1938.

Directions for sound farming practice and contouring in East Griqualand where practically all arable land is on sloping ground.

Gorrie, R.M. Pressure of population and misuse of land in the Punjab. Scot. Geogr. Mag. 54(5):284-295, illus. September 1938.

Paper prepared for the International Congress of Geography at Amsterdam, July 1938.

The following paragraph headings are suggestive of the contents of the article: Forest the enemy of early settlers; destruction of hill forests; pressure on land due to misuse of land; effect of poor grazing on cattle; effect of misuse of land upon the water régime; water supply requirements and the dry season shortage; possible lines of attack; (1) ploughland; (2) livestock and fodder; (3) afforestation and other works.

Government loans and subsidies, etc. for soil and water conservation and artificial fertilizers. Rhodesia Agr. Jour. 35(5):338-344. May 1938.

General conditions for obtaining loans in Rhodesia.

Grasovsky, A.J. Forestry in Palestine. Restoring ancient woodlands to safeguard country's future. Palestine and Middle East Econ. Mag. 10(10):418-420, illus. Oct/Nov. 1938.

The system of control practised in the Forest Reserves of the hill districts of Palestine aims chiefly at arresting erosion, conserving surface water, and as far as possible satisfying the local demand for forest produce and fodder for grazing. The Department of Forests is also concerned with the fixation of sand dunes.

Karunaratne, C.R. Soil erosion prevention at Nugawela supply nursery and multiplication. Trop. Agr. 91(3):156-160. September 1938.

The land in colonial development. Nature 142(3609):1135-1136. Dec. 31, 1938.

Refers to discussions and opinions expressed at the Conference of colonial directors of agriculture in London, July 1938.

"The Conference gave soil conservation an early and prominent place in its discussions. Although the measures needed to counteract soil exhaustion and erosion vary considerably, it was unanimously agreed that the keynote of all conservation programmes is co-operation - between agricultural, forestry, veterinary, medical, educational, railway and public-works departments: in short, a readjustment of social conditions to conform more closely with the properties of the land."

Leckie, W.G. The growing of wattle and production of wattle bark in Kenya. East Afr. Agr. Jour. 4(1):51-62, illus. July 1938.
Soil erosion and wattle, pp. 61-62.

Louw, A.J. Soil-erosion in the Union. VII. The object, construction and maintenance of contour banks. Farming So. Africa 13(149): 304, 320. August 1938.

The N.S.W. soil conservation bill. Jour. Aust. Inst. Agr. Sci. 4(3):121-123. September 1938.

Outlines the contents of the bill which will establish a soil conservation service in New South Wales.

Nolte, E.H. The control of soil erosion in the Union. VIII. Soil erosion as an engineering problem. Farming So. Africa 13(150): 354-355. September 1938.
The importance of engineering measures for control of erosion in South Africa.

Soper, J.R.P. Soil erosion on Penang Hill. Malayan Agr. Jour. 26(10): 407-413. October 1938.

Recent legislation, the Hill Land's Ordinance, to prevent erosion on Penang Hill, Malaya is explained. Conditions under which individual crops are grown are described with special reference to the erosion factor, and the methods by which it is hoped the latter may be countered are outlined.

Suckert, Ezio. Erosione del terreno e piante da copertura nei paesi tropicali dell' Oriente (Erosion of the land and plant covers in tropical lands of the Orient) Agr. Colon. [Italy] 32(6): 273-279, illus. June 1938.

Refers to Malaya, Java, Ceylon, India and Indo-China.

Todd, O.J. and Eliassen, S. The Yellow river problem. Amer. Soc. Civ. Engin. Proc. 64(10): 1921-1991, illus. December 1938.

What western engineers have learned in recent years about the Yellow river's many-sided problems is outlined in this paper. Such evidence as is available is offered to indicate that certain phases of the problems are much clearer to-day than they were in 1928 when the first attempts were made by western engineers to probe into the hydraulics of this exceptional river and suggest methods for its control and regulation. Proposals for a general regulation are also outlined, based on most recent investigations.

The necessity for an energetic soil-erosion control campaign is emphasized.

Williams, D.E. Some practical experience with contour ridging in Matabeleland. Rhodesia Agr. Jour. 35(5): 379-381. May 1938.

Yugoslav government to sponsor land-conservation projects. U.S. Bur. Agr. Econ. Foreign Agr. 2(8): 387. August 1938.

"Sponsorship of land-reclamation, flood-control, and soil-improvement projects by the Government of Yugoslavia is provided for in a decree that became effective on July 1, 1938..."

Soil Erosion and Control. United States

Chatley, Herbert. River-control problems. Engineering [London] 146(3801): 579-580. Nov. 18, 1938.

To be continued.

"The following series will deal with some of the broader matters which enter into the general subject of river control."

I - Soil erosion (in China and the United States)

Enlow, C.R. The uses of mulch. Soil Conserv. 4(6): 136-137, illus. December 1933.

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(b) The extension of the apron to allow the formation of the hydraulic jump on it, brings no benefit.

(c) Height of the sill is an important factor.

(d) The sill is best situated at the end of the apron.

(e) The greatest erosion occurs at the beginning of the experiment.

(f) The sill continues effective with change of material and section of weir.

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watershed from a general viewpoint and touches the subjects subsequently systematically developed in other parts of the same volume.

"Mr. Giandotti does a broad review of the preliminary studies, and investigations essential for a reclamation project. Hydrological, geological, forest and land maps of the watershed to be regulated must be available, together with a thorough knowledge of the actual utilization of water, the slopes of the basin, the bedload transportation, the morphological, physical and hydraulic characteristics of water courses and finally the regulation works already carried out as well as the results heretofore obtained.

"The general directions to be followed to the regulation of the basin are exposed.

"Chief subjects are the means for reducing the bedload transportation by streams and floods, the determination of the form and size of the section and the new profile of the regulated water courses. Finally a brief statement is made on the reciprocal relation between surface and underground water, and integral land reclamation."

Summary: Part 2. "The works dealt with in this part refer to well established water streams and not to streams in the higher basin from which they issue.

"In this part the chief principles that should be observed in the lay out and construction of works of regulation and correction of rivers and protection against floods are set forth. It is explained how a distinction should be made chiefly in the plain track, and very often also in the middle track, between low and high water bed and different regulation systems must be adopted in each case.

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"As a part of general pedology, micropedology deals with the morphology, genesis, general dynamics and biology of soils. Soil mineralogy, as a counterpart of micropedology, deals with the independent study of the soil minerals, especially the so-called clay minerals. Both branches, though primarily united by the application of microscopic methods, relate to each other as general mineralogy relates to petrography and petrology. Soil mineralogy is, therefore, an ancillary science and not a part of micropedology..."

"This book is devoted to the fundamental principles of microscopic pedology. The importance of its application in the different branches of practical soil science especially in the fields of soil erosion, soil mapping, agricultural soil classification, tillage, engineering and road construction, will be the subject of separate publications to follow..." -- Foreword.

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"The main object of the field work was to map the boundaries of the land utilization regions of Tasmania and to make an investigation of the geographical factors connected with the location of those boundaries."

"Within the principal land utilization regions the detailed features of the cultural landscape with its pattern of variously-cropped fields, pasture and treed lands, and buildings, roads, fences, etc., are intimately related to geographical conditions. Particular attention was given to measuring the effect on land utilization of three things, namely, degree of surface slope, the aspect of hill-sides, and altitude. The first-named is important insofar as slope affects the development of soils and run-off of surface water. It also determines various characteristics such as the practicability of employing large or small-scale agricultural implements, and the acceleration of downhill movement of soil particles following cultural practices. The latter is commonly referred to as soil erosion. The aspect of

hill slopes is important in determining effectiveness of insolation, frequency of frost, and exposure to winds which effect local temperature and rainfall. Finally, changes with increasing altitude of natural vegetation and physiography are connected with temperature variations, and are also paralleled in changes in land use. The latter factors, aspect and altitude, are of more critical significance in Tasmania than elsewhere in Australia, because of Tasmania's higher latitudes and therefore they assume special interest. The second part of the field work was therefore concerned with studying the operations of these three factors, slope, aspect and altitude, in modifying the cultural landscape within the major land utilization regions." - Introduction.

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"The growth of a summer green manure crop (cowpeas) at first decreased the growth and yield of the trees owing to the competition of the cowpeas for soil moisture during the summer. After about ten years the trees on the cowpeas plots caught up to those on the clean-cultivated plots. The better growth of the trees on the cowpeas plots compared with those of the clean-cultivated plots, in later years, is due to the decline in fertility and loss of structure of the soil of the clean-cultivated plots, combined with the fact that the cowpeas do not offer such strong competition to mature trees as to young trees...

"During growth, the green manure depresses the water table.

"The increase in water-holding capacity of the soil after several years' green manuring is statistically significant but practically unimportant. The green manure has, however, a marked effect in preventing or reducing the loss of structure of the soil that is noted in the clean-cultivated plots.

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